

## PATENT ABSTRACTS OF JAPAN

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## (54) METHOD FOR DRIVING DISPLAY DEVICE

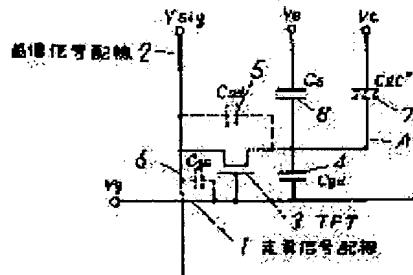
## (57) Abstract:

PURPOSE: To reduce a driving power and improve the picture quality of a display device by transmitting a signal voltage to matrix-like picture element electrodes connected to a 1st wiring during the turned-on period of a switching element connected to the picture element electrodes and supplying modulated signals at every two fields to the 1st wiring during the turned-off period.

CONSTITUTION: When a switching element is composed of a TFT, potential changes  $V_g$  as the value of  $C_{dg}V_g$  of scanning signals and picture signals induced through a gate-drain capacitance  $C_{gd}$  is generated in the negative direction.

Therefore, a potential change is generated at picture electrodes in the positive direction by  $2C_sV_e/V_t$  and superimposed upon the potential change  $C_{gd}V_g/C_t$  by applying a positive modulated signal width  $V_e$  through an accumulated capacitance  $C_s$ . The relation between these potential changes can be set so that the relation can satisfy an expression,  $C_{gd}V_g/C_t = (C_sV_e(-) - C_{gd}V_g)/C_t = \Delta V^*$ . When the value of the  $\Delta V^*$  is higher than the threshold voltage of liquid crystal, the output amplitude and driving power of a picture signal driver can be reduced by supplying part of a liquid crystal driving voltage from the capacity coupling potential.

Therefore, the occurrence of flickers, picture memories, etc., can be eliminated by compensating at least part of a DC component induced by the dielectric anisotropy, etc., of liquid crystal.



## LEGAL STATUS

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